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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/941,479	08/29/2001	Sihem Amer Yahia	1999-0673	6228

7590 03/09/2005

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EXAMINER

WOO, ISAAC M

ART UNIT	PAPER NUMBER
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2162

DATE MAILED: 03/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/941,479

Applicant(s)

YAHIA ET AL.

Examiner

Isaac M Woo

Art Unit

2162

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-2, 5 and 10-12 is/are rejected.
- 7) ☒ Claim(s) 3-4, 6-9 and 13-17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 October 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

1. This action is in response to Applicant's Amendments, filed on October 05, 2004 have been considered but are deemed moot in view of new ground of rejections below.
2. Claim 1 is amended. And claims 1-17 are pending.
3. The objection to the drawings, has been withdrawn because of submitting new drawing and accepted by examiner.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 5 and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chandra et al (U.S. Patent No. 6,457,047, hereinafter, "Chandra") in view of Cooper et al (5,948,063, hereinafter, "Cooper").

With respect to claim 1, Chandra discloses, generating a topology cache (26, fig.1, col. 4, lines 7-49) of the distributed directory servers (30, fig. 1, col. 4, lines 7-49, cache directory server includes the lists of application cache lists (topology of cache)); storing the generated topology cache at each server, see (fig. 1, col. 4, lines 7-49); and upon receiving, at one server, a request from a directory client (72, fig. 3) associated with that server, (fig. 3, col. 6, lines 10-61) sending a copy of the topology cache to the client to determine the identity of each directory server capable of returning answers to the query (88, fig. 3), see (fig. 3, col. 6, lines 10-61, col. 7, lines 13-67). Chandra discloses servers (30, col. 4, lines 7-49). Chandra does not explicitly disclose the *distributed topology of directory* servers. However, Chandra discloses, "server-mirroring. The basic idea is to statically replicate the database, D, and the search application for the database, A, at a number of nodes of the network so that in essence the query service is replicated in its entirety at multiple nodes. If a web site has multiple mirror sites, a directory name service (DNS) lookup (typically requested by the browser) will return multiple IP addresses in a list with a predefined order and the browser typically selects the first IP address. If the server selected by the browser is overloaded and a time-out occurs, the browser will select the next IP address in the list as so on", see (col. 2, lines 15-51). This teaches DNS is one of a directory service that is distributed through network. Thus, the servers can be the *distributed topology of the directory* servers. Chandra does not explicitly disclose, topology describing the forest-structured. However, Cooper discloses, the tree structured within the object cache 92, see (fig. 17, col. 24, lines 50-61). This teaches that cache structure is tree (forest) shape. Therefore,

it would have been obvious to a person having ordinary skill in the art at the time of the invention was made to modify Chandra by incorporating topology describing the foreset-structured as discussed by Cooper. Thus, one having ordinary skill in the art at the time the invention was made would have been motivated to use such a combination because that would provide Chndra's system the enhanced cache query method with tree (forest) structured cache object. Because hierarchical order (tree of forest) of cache structure provides fast data searching mechanism in data retrieval system.

With respect claim 2, Chandra discloses that topology cache includes subordinate and superior knowledge references associated with each directory server, defining its neighboring directory servers, see (fig. 1, col. 4, lines 7-49).

With respect claim 5, Chandra discloses, query associated with the directory client comprises an LDAP query, see (col. 3, lines 54-67).

With respect to claim 10, Chandra discloses that the query comprises a complex query, see (fig. 3, col. 6, lines 10-61, col. 7, lines 13-67).

With respect to claim 11, Chandra discloses that hierarchical query including either multiple-base-DNs, existential queries, conditional queries, or any combination, see (fig. 3, col. 6, lines 10-61, col. 7, lines 13-67).

With respect to claim 12, Chandra discloses that complex query comprises an aggregate query including at least numeric macro conditionals, see (fig. 3, col. 6, lines 10-61, col. 7, lines 13-67).

Allowable Subject Matter

6. Claims 3-4, 6-9 and 13-17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 2162

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Isaac M Woo whose telephone number is (571) 272-4043. The examiner can normally be reached on 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

IMW
March 3, 2005


JEFFREY CORRIELLUS
PATENT EXAMINER